

## Marking Scheme Biology $\bar{X}^m$ .

1). Saprotrophic nutrition eg. Bacteria & fungi  $\frac{1}{2} + \frac{1}{2} = (1)$ .

<p>2) Aerobic Respiration</p> <p>(a) It occurs in the presence of oxygen</p> <p>(b) The end products are <math>CO_2</math> and water.</p> <p>(c) 38 ATP molecules of energy is released</p>	<p>Aerobic Respiration</p> <p>(a) It occurs in the absence of oxygen.</p> <p>(b) The end products may be alcohol or lactic acid</p> <p>(c) 2 ATP molecules of energy is released. (any two) <math>1+1=(2)</math></p>
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(3) Function of HCl: It creates an acidic medium which facilitates the action of the enzyme pepsin / kills the germs (any one).

(a) Bile: Help in emulsification of fats (breaking fat into smaller globules).

4)  $\xrightarrow{\text{pro-fer}}$   $CO_2 + H_2O + 38ATP$ . (1)

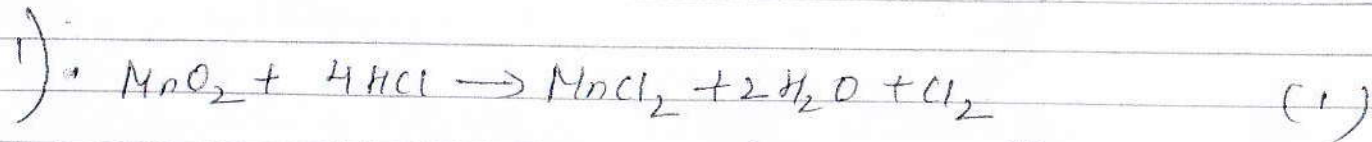
Glucose  $\rightarrow$  Pyruvate  $\rightarrow$   $\xrightarrow{\text{ab-fer}}$   $C_2H_5OH + CO_2 + 2ATP$  (1/2)  
Plants  
any alcohol

$\xrightarrow{\text{ab-fer}}$   $C_3H_6O_3 + 2ATP$  (1/2)  
animals  
lactic acid

- 5) (i) Absorption of light energy.  
(ii) Splitting of water molecules into  $H_2$  &  $O_2$   
(iii) Conversion of light energy to chemical energy.  
(iv) Reduction of  $CO_2$  to carbohydrates.

6) HUMAN DIGESTIVE SYSTEM.

$1\frac{1}{2}$  diagram +  $1\frac{1}{2}$  labellings



2) Displacement Rxn

(i) In this reaction more active element displaces less active element from its salt soln.

(ii) These reactions are usually slow.

(iii) During these reactions usually change of colour takes place.

2) Double Displacement Rxn.

(i) In this reaction, there is an exchange of ions between two reactants.

(ii) These reactions are usually fast.

(iii) During these reactions usually precipitates are formed.

(any two)  
1+1=2

(3) (a) The micro-organisms oxidize the fats and oils present in them and give some unpleasant smell and taste. This process is known as rancidity -  $\frac{1}{2} + \frac{1}{2} = (1)$

(b) (i) Keeping the food in air tight containers

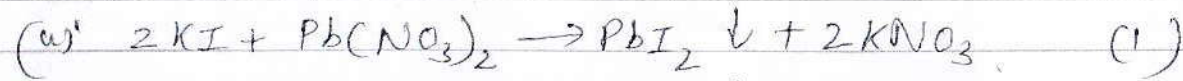
(ii) By adding anti oxidants.

(iii) Deep freezing

(any 2)  $\frac{1}{2} + \frac{1}{2} = (1)$

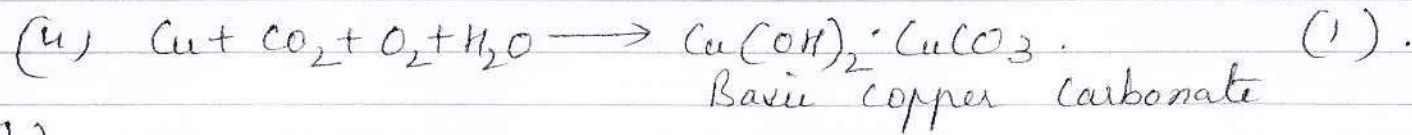


(4) (i) Yellow.  $\frac{1}{2}$

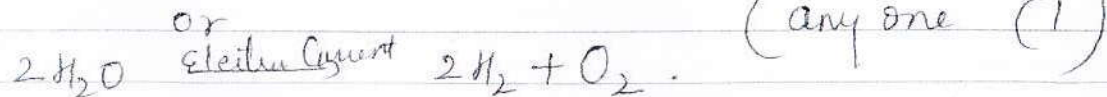
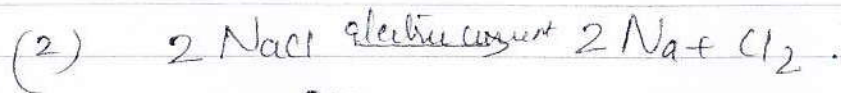
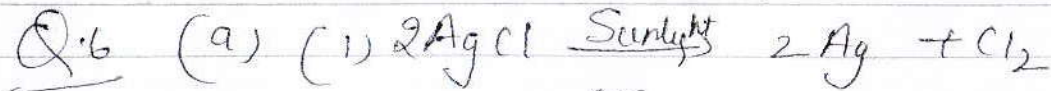


(iii) Double displacement / precipitation reaction  $\frac{1}{2}$ .

(5) (a) (i) copper (Cu), corrosion  $\frac{1}{2} + \frac{1}{2} = (1)$

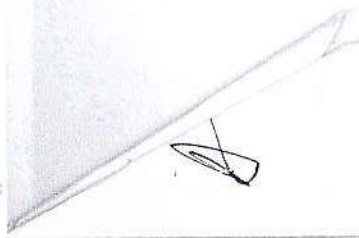


(b)  $PbO \rightarrow$  Reduced.  $C \rightarrow$  Oxidized  $\frac{1}{2} + \frac{1}{2} = (1)$



(b) The food that we eat like rice, potato etc contains carbohydrates. On digestion carbohydrates are converted to glucose. During respiration

4



The air we breathe oxidizes the glucose into  $\text{CO}_2$ , water & heat which provides our body with sufficient energy. (1)